



Volume 4, Issue 1 Summer 2002

NOTES FROM

CELEBRATING A
CENTURY
OF CONSERVATION

THE REFUGE



Around The Complex

NWR Staff Makes The Difference

Mendel Stewart, Project Leader, San Diego NWR Complex



Members of the San Diego NWR Staff

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In the two years I've been here in San Diego, much has changed; new lands have been added to the Refuge System, knowledge has been gained about management of important species, improvements have been made to habitats, and staff members have come and gone. In June of 2000 we had 13 permanent full-time staff and today we have 23 (many of them are pictured above). Two of these positions resulted from additional funding we received to help us accomplish specific tasks like law enforcement and none-native plant control. We also have several temporary and part-year staff to help us with everything from biological monitoring to firefighting.

The bulk of our staffing increase is the result of Congressional funding of the National Fire Plan which for the first time provided significant support

for the nation's wildland firefighting effort. This surge in emphasis on wildland firefighting and management involves all the federal land management agencies. As a result of this national effort, our fire crew now numbers ten, among them Fred Workman, Gordon Tamplin, and Greg Hultman, and we have been able to purchase two new fire engines. We now have the resources to provide, not only protection for our own lands, but the ability to better assist other agencies in southern California wildfire protection. Bill Molumby, our Fire Management Officer, has helped to oversee this growth and has done an outstanding job.

We also have many new additions to our refuge staff: Val Urban, Manager at San Diego NWR and Tom Reed, the new manager of the San Diego

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Disney and Jiminy Cricket Spread The Word On National Wildlife Refuges

Barbara Simon

As part of the celebration for the 100th anniversary of the National Wildlife Refuge System in 2003, refuges in California and Florida will be joining their respective state partners in the Jiminy Cricket Environmental Challenge (JCEC). The JCEC is an incredible environmental education program that reaches over 90,000 California fifth grade students in over 3,000 classrooms across the state with a challenge to make an environmental difference in their communities.

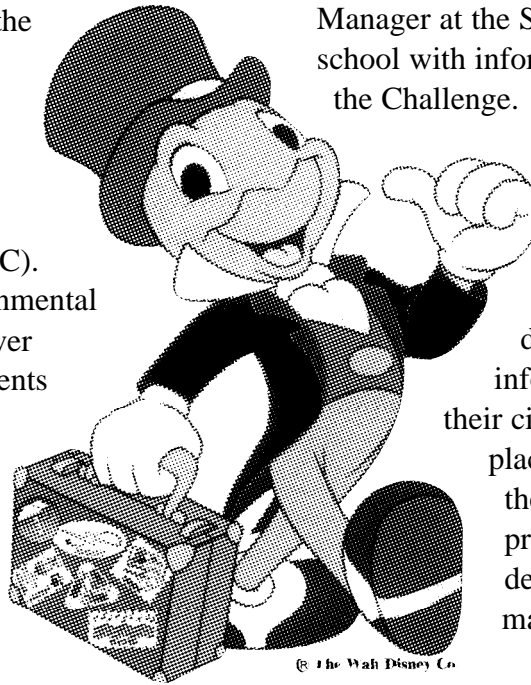
In California, the California Environmental Education Interagency Network (CEEIN) composed of numerous state agencies, is the umbrella under which each agency participates in the program. Each agency makes field trips, in-class programs, curricula, and other activities and materials available to teachers and students for their projects. Refuges will become a part of CEEIN this year and will remain a partner in order to share resources and ideas with the state and encourage stewardship of refuges.

Students first develop environmental projects for use in their classrooms, schools and community and submit their projects for judging to a panel drawn from CEEIN's participating agencies. The entries are judged not only on originality, but on the incorporation of research and information into curriculum, and on how effective the students are in transmitting the information to their community. The students then evaluate the program to see if there has been positive change in the desired behaviors their projects target.

This year the winning school was Miano Elementary

in Los Banos. John Fulton, the Assistant Refuge Manager at the San Luis Refuge, provided this school with information on wetlands, their topic for the Challenge. Miano students studied wetlands in their community and took action.

They painted signs on street drains to alert citizens to their downstream wetland neighbors, designed and distributed doorknob signs with wetland information, made a presentation to their city council that was televised; placed stories in the local newspaper, then followed up by evaluating their project with the public works department to see if their work had made a difference. It had!



*Jiminy Cricket,
Environmentality Spokescricket*

All classrooms that enter the Challenge receive small gifts from the Disney Company, and the winning school can receive up to a \$500 award. The winning classroom, of course, receives an all-expense paid trip to Disneyland, among other awards, and is honored at ceremonies that include such dignitaries from the state and Disney Company as Delaine Eastin, California Superintendent of Public Instruction; Roy Disney, Vice Chairman of the Board; Disney's Vice-President of Environmental Policy, Kym Murphy (who also sits on our National Centennial Committee); the Executive Director of the State Board of Food and Agriculture, Karen Manor; Linda Moulton-Patterson the Board Chair of the California Integrated Waste Management Board, and Renee Hoyos, Special Assistant to Secretary of Resources. Also present for this year's awards were 22 other ranking members of various State of California agencies.

Tijuana Estuary Explorers

The Zoological Society of San Diego through another generous grant from Chevron is again

partnering with San Diego NWR Complex and our partners at the Tijuana Estuary in developing the Tijuana Estuary Explorer program.

Tijuana Estuary Explorers is an in-class and field experience that incorporates reading, writing and science into four comprehensive activities about the Tijuana Estuary and its watershed. Before the field trip, students will read the field notes of Pablo and Silvia Hernandez, as they explored the watershed and estuary, just as students will soon do. Included along with these journal notes, is information that students need to help them create their own journals using the questions and activities provided.

At the end of the field trip, teachers and students will be given "Take Action" magnets and worksheets to assist them in working in their schools and communities to conserve wetland habitats. Teacher training will begin in August and our first students will be on-site in September and October. Like "Sweetwater Safari" this partnership extends our ability to reach greater numbers of students with well-developed, sophisticated curricula.

Sweetwater Safari, our field and classroom backpack curriculum developed with the Zoo and the Chula Vista Nature Center at Sweetwater Marsh last year, is now posted on the web at <http://www.handsontheland.org>. Hands-on-the-Land

is yet another partnership of federal agencies and private organizations including the National Environmental Education Training Foundation and Partners in Resource Education.

For more information or to volunteer for any education program, please call Barbara Simon at (619) 691-1262



Dr. Zoolittle's Refuge Message

We're in the process of developing another new program with the Zoological Society - one entire show on migratory birds, and adding National Wildlife Refuge System information to an



Dr. Zoolittle

Courtesy San Diego Zoological Society

existing show on endangered species. These and other of the Zoo's educational programs go out to area schools and are performed in the Clarke Theater at the Children's Zoo in Balboa Park where we're able to distribute materials and talk about the Refuge System. Through a scholarship grant from the Friends of San Diego Refuges for schools unable to participate, the Zoo will take the Refuge System message to thousands of children in San Diego.

For the first time, on International Migratory Bird Day, a member of our staff, Irvin Fernandez, appeared with Dr. Zoolittle. As migratory - and some not so migratory - birds flew by the Clarke Theater's windows, the audience - in very excited voices - alerted Dr. Z to their appearance. Visitors learned the definition of migratory and non-migratory birds and where they can see them in San Diego. Irvin also helped members of the audience "build a bird" by dressing volunteers in appropriate plumage as their characteristics were revealed. I laughed a lot!

Our Friends group adopted the program and will participate in the Clarke Theater programs. For information, please call Susan Fuller at (619) 429-7761 or Barbara Simon at (619) 691-1262.

Centennial Caravan Rolls Out in 2002

By Bruce Monroe

Two hundred years ago, the Lewis and Clark Expedition explored our last frontier, the far West. Since then, industrialization and human population growth have dramatically changed the pristine landscape and seascape Meriwether Lewis and William Clark once saw.

From loss of wetlands and other habitats to the problems caused by urban runoff, the West Coast of the United States is under tremendous pressure from its burgeoning population, placing many resident and migratory species in jeopardy. The Friends of the Seal Beach National Wildlife Refuge has found a novel way to revisit portions of this famous expedition, document West Coast environmental changes, bring those changes to the community's attention — and commemorate the National Wildlife Refuge System's centennial anniversary in March 14, 2003 — all in one project!

The Friends have launched a "Centennial Caravan Campaign" that will travel from southern California at the Mexican border to Washington's Canadian border and back. The Caravan will follow the Pacific Flyway and other wildlife corridors, making stops at many Pacific Region refuges. This journey will begin on March 14, 2003.

Caravan participants will work with local refuge managers and community groups to examine the potential to expand, restore, and enhance wildlife habitat. They will explore and report on the health of migratory birds, fish, and mammals, including those that are threatened with extinction. Participants will analyze the resources required to engage community support for stewardship. The

findings of the expedition will be reported to major media centers on the West Coast. The Centennial Caravan is a volunteer effort of West Coast non-profit conservation groups including Friends of the Refuges, National Audubon Society, Surfrider Foundation, Sierra Club, American Oceans Campaign, National Wildlife Refuge Association, U.S. Ramsar Committee, and the Watchable Wildlife Association. Other sponsors are being sought. We are recruiting volunteers and soliciting donations, both financial and in-kind.

By exploring and celebrating refuge accomplishments over the past 100 years, we hope to contribute to a responsible vision for the next 100 years of wildlife stewardship. Two of the goals for the commemorative celebration are to inform the public about wildlife refuges nationwide and to get more community support for each individual refuge.

This is a very ambitious exploration of many miles of highways and flyways but, with dozens of friends groups already in service, it is more a matter of communication and collaboration than one of overcoming natural barriers as Lewis and Clark had to do. For more information or to suggest ideas for fun along the way, phone 562/430-8495 or e-mail: bandcmmonroe@earthlink.net. 🐾

Bruce Monroe is a volunteer at Seal Beach NWR, co-chair of Friends of SBNWR, and represents the Sierra Club in this effort.



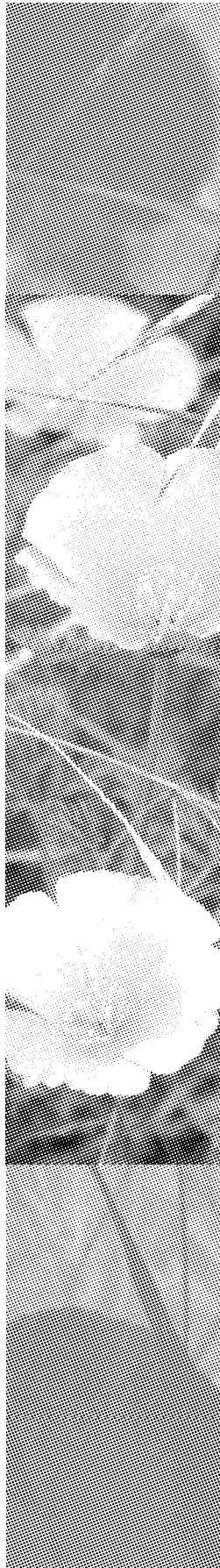
Around The Complex

Continued from Pg. 1

Coastal Refuges, Tijuana Slough, South San Diego Bay and Sweetwater Marsh. Two new Biological Technicians; David Griffin and Arnold Grassi add to our ability to monitor endangered species and to more fully discharge our Multiple Species Conservation Plan monitoring obligations. We are in the process of hiring an Assistant Refuge Manager for the San Diego NWR and have just selected a Law Enforcement Officer for the San Diego Coastal Refuges. These new members of our staff join current staff members Brian Collins, Debbie Good, Irvin Fernandez, Barbara Simon, Joe McNally, Bill Molumby and John Bradley. Our new staff will enable us to enhance many of our current projects and create others to better serve the public and carry out our mission. Of course, none of our work could be accomplished without our administrative staff, BJ Hansen and Joyce Roberts.

In other news, the National Wildlife Refuge System Centennial Celebration is shaping up to be a big event locally. Plans are underway for a "Centennial Caravan," the brain child of the Seal Beach Friends Group. Read more about it in this issue.


Barbara Simon, our Education and Information Specialist, has been asked to coordinate the Jiminy Cricket Environmental Challenge through the California Environmental Education Interagency Network (CEEIN). A variety of State of California agencies and The Walt Disney Company currently support the Challenge, a program that brings environmental education to thousands of California school children annually. Brian Collins, Wildlife Biologist for the San Diego Coastal Refuges, has been overseeing another exciting activity - the



captive propagation of the endangered Light-footed Clapper Rail. The effort is in partnership with the Chula Vista Nature Center, Sea World and the Center for the Reproduction of Endangered Species at the Zoological Society of San Diego.

Land acquisition for the San Diego NWR is still going strong. We are in the process of completing the acquisition of almost 400 acres to add to this refuge, and in partnership with the State, are working on another 2000 acres that if all goes well could be conserved within the year. The prospects for future land acquisition funding looks brighter in view of a proposed \$2 million increase to our 2003 land acquisition budget. If we receive the total \$4 million we will be able to continue to acquire lands from willing sellers.

The Comprehensive Conservation Plan for the South San Diego Bay and Sweetwater Marsh NWRs is currently being reviewed internally. We have contracted for an engineering analysis that is expected to be complete in August. This information is necessary before we can determine appropriate restoration alternatives, and will delay the release of the draft CCP for public review until September.

There are many opportunities and challenges facing the Complex in the coming years, but as our staff grows, we look forward to providing more opportunities for people to experience their public lands and to managing these wild places wisely for future generations to enjoy. If you cannot visit our refuges in person, please visit our web site at: <http://sandiegorefuges.gov>. 

Community Workshop:

Introducing Natives To Locals

By Debbie Good

Saturday May 18 dawned much like any other day, with the sun rising over the mountains in the East, but Resource Ecologist, Greg Abbott, Lorena Warner-Lara and Callie Mack decided that this Saturday's mission would be different. Our mission as we chose to design it was to share our collective knowledge of native plants with the people in our local communities.



participants take notes on how to propagate native plants.

Greg included information on the mounting problem of invasive exotic plants, especially from yards adjacent to the Estuary as well as advising workshop participants on native trees, their eventual size and water needs. Lorena addressed the ability of these plants to bloom and flourish with little or no water – a huge positive factor when contemplating replanting your garden. Callie Mack brought beautiful slides of native plants in her yard and the interpretive display from the local chapter of California Native Plant Society.


Native plants go through seasonal cycles and

fortunately for us spring is the most beautiful time for color and blossom profundity. In other words “WOW”! My favorite (and a favorite of the rabbits and squirrels as well) is the *Malacothamnus fasciculatus* known commonly as Bushmallow. The profuse lavender blossoms sing the song of spring. (Well actually, it's the birds in the bush that are singing), but are good examples of drought-tolerant natives that can beautify any landscape. We were fortunate to have the *Romneya coulterii* or Matillija poppy in bloom as well as the Woolly blue curls (*Trichostema lanatum*) After touring the garden participants were sufficiently impressed with the beauty of native plants and fully-informed about their water conserving capacity. Our next step moved us on to the planting demonstration where we discussed drainage, soil amendments and proper planting techniques.

Native plants go through seasonal cycles and fortunately for us spring is the most beautiful time for color and blossom profundity.

A slide show by Photographer Phil Roulliard showing the wildlife uses of native plants, closed the workshop. Each participant was given a native plant to take with them as the first of many natives in their home gardens. We had a great time teaching “natives” to locals.

This workshop will be repeated periodically. Please call Debby Good at (619) 575- 2704 for information on future workshops.

(Many thanks to our partners at State Parks, and volunteers, Yaz Ikegawa and Leslie Haney.) 

Meet our new staff -

David J. Griffin

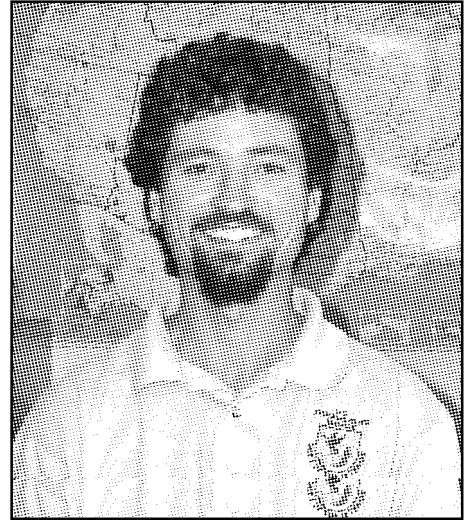
Biological Science Technician, SDNWR

Fish and Wildlife Service Field Biologists often bring skills and talents to their work that reflect interests beyond the wild things they monitor and protect.

David Griffin, our new Biological Science Technician at the Otay-Sweetwater Unit in Jamul certainly qualifies as talented as well as interesting. After high school, David studied woodcraft and outdoor skills and with a friend built a log cabin using only axes, saws, and homemade tools. David says he was “born in Connecticut, raised in Ohio and ‘wised up’ in the western U.S. and Alaska.”


While studying for a degree in Biology at Oregon State University, David worked for the Department of Fisheries and Wildlife as a lab and field assistant and, while working for a graduate student, studied the effects of air-borne contaminants on terrestrial mammals and non-migratory fish in arctic ecosystems. David spent 3 months each year in the Brooks Range on the Arctic National Wildlife Refuge and Noatak National Park and Preserve in northern Alaska. In 1993, he traveled with other research staff to Norilsk, Russia and the Taimyr Peninsula (in northern Siberia above 70° latitude) to work with Russian scientists who were also studying air-borne contaminants.

From working with arctic ecosystems, David moved to Tucson to work for the University of Arizona as a research technician in quite a different climate. While at the UofA, David developed a Neotropical Migratory Bird monitoring program on the Barry M. Goldwater Air Force Range, studied wildlife use of desert



waterholes on the Cabeza Prieta National Wildlife Refuge, and assisted with bat surveys at the Goldwater Air Force Range and the San Bernardino National Wildlife Refuge. He also worked on a wildlife inventory of the Marine Corps Air Ground Combat Center in Twentynine Palms, California. As a crewmember on the Arizona Breeding Bird Atlas project, David traveled all over the state from low desert to sub-alpine forests documenting the breeding status and relative abundance of all species encountered.

David continues to pursue other interests including organizing, conducting, and compiling two Christmas Bird Counts on the Cabeza Prieta NWR in Arizona. He is also working on a book chapter about the birds of preserved lands in southwestern Arizona. And, as a wildlife photographer, David recently had a photograph published in National Wildlife magazine.

“Whenever possible, David said, “my wife and I travel to the Mojave and Sonoran deserts to explore some of our favorite “unknown” places. Occasionally I still make exciting discoveries in those places.” 


The Centennial Celebration starts here!

On September 28, 2002, the San Diego NWR Complex will kick-off the year long "Centennial Celebration" with a major restoration project at the Tijuana Slough NWR followed by a barbeque at Sweetwater Marsh - and a few surprises.

We hope all of you will attend our "birthday party." You can bring the gift of your hard work, pledge,

*We hope all of you will attend
our "birthday party."*

work party or other stewardship commitment to any of San Diego's refuges.

You'll be receiving an invitation in August with a fuller explanation of the activities, and the refuges' birthday wish list. It is only through your stewardship that we can conserve the precious wildlife heritage of our region for future generations. Mark the date on your calendar, bring your friends and family and enjoy a great day. See you there! 



Our new brochure is here!



If your organization would like copies, please let us know, we'd be happy to send them to you.

Call Barbara Simon at (619) 691-1262.

Light-footed Clapper Rail Program Enters Its Second Successful Year

Brian Collins,
Wildlife Biologist, Coastal Refuges

In 2002, our partnership with the Chula Vista Nature Center and SeaWorld of San Diego on developing a protocol for a captive breeding program for the endangered Light-footed Clapper Rail is progressing and growing. The Rail is one of our most endangered birds with only hundreds left in the wild in the coastal salt marshes of California. We've been working with our partners, who include both private ornithologists and the Zoological Society of San Diego, to discover how captive breeding might enhance our remaining wild Clapper Rail populations.


The species' wild populations are primarily located in small, isolated wetlands. This isolation can lead to demographic and genetic impacts that negatively affect their chances for survival and recovery. As our coastal wetlands are healed and expanded through restoration projects in the coming decades, we hope this captive breeding program will give the Rail a better chance to recover by enhancing its numbers and genetic diversity. Propagating Rails in captivity enables us to maximize our captive Rails' genetic variability through selective breeding of pairs of birds and by tracking the relative numbers of males and females in a given isolated population.

The Fish and Wildlife Service's international outreach personnel have initiated contacts with the government of Mexico to allow us to work with researchers in Baja, California in order to increase our understanding of the overall Rail population. Biologists will analyze the genetics of birds remaining in salt marshes in Mexico and perhaps even import some Mexican stock to add to our captive breeding flock.

We've made several exciting observations in our captive pairs this year. Two of our flock have re-nested. Re-nesting is defined as the laying of a second clutch of eggs in a season after the first group of chicks has been raised. Another exciting discovery was that the male and female offspring of one of our original pairs mated, made a nest, incubated, hatched and successfully reared a new generation.



This is exciting not only because we now have three generations of birds in our program at one time, but because this pair was entirely hand-raised and had never seen another adult Rail until they were introduced to each other. Additionally, one pair actually moved their eggs from the original nest to another they had made as a response to the presence of ants in the first nest.

Later this year, we will release captive bred Light-footed Clapper Rails into the wild. We hope to increase the program over time until we are able to accomplish a meaningful contribution to the recovery of this beautiful and very rare native of southern California's wetlands. 



Biological Monitoring

Arthur Davenport,
Wildlife Biologist
San Diego NWR


There is a pervasive impression that monitoring of plants and wildlife is a simple task. The development of a thoughtful monitoring protocol for any species takes careful planning. If the designs for a scientific investigation are not well-developed the resulting information gathered will likely range from useless to misleading. In the case of the monitoring for the MSCP, much work remains to be completed on the design side before reliable quantitative information will be available to guide management decisions in the future.

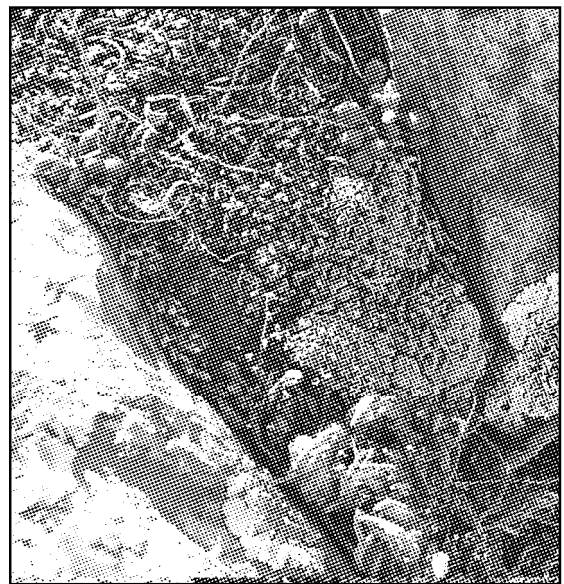
The development of monitoring designs necessitates the prior development of clear questions to be answered. Additionally, the designs must often be modified following the collection of preliminary information in the field due to the complexities and nuances of each species. It is important to note that preliminary information may take several years to collect.

This year, along with other studies, we have initiated monitoring of variegated dudleya (*Dudleya varietata*), (Variegated dudleya) a small perennial plant. Large portions of the distribution of this plant have been lost to urban development.

Monitoring sites are being identified as we survey the refuge for this and other species. So far, we have identified five separate sites (two of which represent new localities for the species). At each of the five sites we have established 10 by 30 meter plots. Within these plots we are randomly sampling several variables (e.g., vegetative cover by species), in an effort to describe the larger ecological/botanical setting within which this species occurs. This information will assist us in identifying other potential sites of this species and

perhaps help us understand changes in its population numbers through time. In addition, we are sampling smaller plots (i.e., 1 by 1 meter) in an effort to understand the effects of scale on describing its habitat and monitoring its populations. That is, how may scale affect our perception of what is happening with the plant.

At each of the larger plots, remote weather monitoring devices will be established to track rainfall, humidity, and temperature due to anticipated differences in micro-climate at each of the sites. The reason for this is that these variable are anticipated to strongly affect the number of plants that are observable on a yearly basis. Thus, changes in population numbers may merely reflect climatic conditions and not changes in actual population numbers. 



Dudleya Varietata is the plant with the small berry-like fruit on it. It's not in bloom.

Wildland Urban Interface in Southern California

Bill Molumby,
San Diego NWR,
Fire Management Officer

How do you balance the protection of over 12 critical habitats and 23 federally listed, threatened and endangered species with the protection of private property? Fire management staff in southern California regularly operates within a complex web of environmental groups, government officials, regulatory agencies and private property owners in a zone termed the “Wildland Urban Interface or “WUI” to accomplish that goal.

WUI is defined as any location with manmade structures in close proximity to wildland fuels. A dramatic example of this “WUI” zone is the San Diego National Wildlife Refuge in southeast San Diego County which is surrounded by human development. This refuge was established for the protection of numerous threatened and endangered species covered under the Multiple Species Conservation Plan, a habitat conservation effort by numerous local, state and federal jurisdictions in San Diego’s east county to conserve habitat diversity while allowing appropriate human development.

Southern California chaparral, known for historically large and disastrous wildfire conflagrations, covers most of the current refuge and planning area. Numerous homes and subdivisions inside the refuge acquisition boundary further complicate fire management planning. Over the last 10 years, the area in and around the San Diego National Wildlife Refuge has averaged 15 wildfires per year - all of them human caused. Early in refuge planning it was recognized that the effects of fire management on the refuge and on private property needed to be addressed. In 1996, a fire management officer was hired to plan, organize and implement a comprehensive strategy for wildland fire prevention, with refuge and private property protection as the primary goal.

Education, suppression and hazard fuel reduction



are the major components of this strategy. Our messages communicate the value of refuge lands to the community and the need for wildlife and wildlife habitat protection. However, the development of a suppression organization was a more difficult task. Initiating and paying for equipment purchases, hiring personnel, meeting national qualification standards, establishing an infrastructure and local, regional and national coordination have all taken time and effort.


This interagency coordination has been the most crucial element in our suppression efforts; six municipal, one tribal, one state, and two federal fire departments required cooperative fire protection agreements and daily coordination. Each agreement details how the Service will integrate with each department’s fire response, fire command structure, communications network and addresses a myriad of other issues that needed close coordination.

Hazard fuel reduction is the critical link between prevention and suppression. The goal is to reduce the amount of burnable fuel along the WUI. A dual purpose is served; to lower the flame lengths and intensities at the interface by providing a “defensible space” in which firefighters can operate, to protect homes, and to protect the refuge from wildfires entering from private property. Coordination with local fire marshals regarding

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Wildland Urban Interface In Southern California

Continued from Page 11

hazard reduction compliance enables us to quickly identify areas of concern in the WUI. From this planning stage, the refuge fire management staff and the WUI project coordinator develop projects which serve to protect both the refuge and private homes. Private property owners are an important part of reducing burnable fuels on private lands that could significantly impact the refuge. Much of our effort is directed to educating homeowners whose property is adjacent to the refuge. These efforts include personal contacts, participation on the San Diego Fire Safe Council, and distribution of brochures on wildfire safety and landscaping. 

NOTES FROM THE REFUGE

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Contributors: Brian Collins, Arthur Davenport, Debbie Good, Bill Molumby, Bruce Monroe, Barbara Simon, Mendel Stewart

All photos courtesy U.S. Fish and Wildlife Service.

For information contact Barbara Simon, (619) 691-1262.

Visit us on the web at <http://sandiegorefuges.fws.gov>



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Sweetwater Marsh NWR
1080 Gunpowder Point Drive
Chula Vista, CA 91910



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